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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/807,351 | 03/24/2004 | Akihito Kusano | 033498-024 | 5379 |

21839 7590 05/23/2005

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EXAMINER

BURCH, MELODY M

ART UNIT PAPER NUMBER

3683

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/807,351

Applicant(s)

KUSANO ET AL.

Examiner

Melody M. Burch

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 7-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/24/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

1. Applicant's election with traverse of Species I in the reply filed on 4/29/05 is acknowledged. The traversal is on the ground(s) that the application can be examined without serious burden. This is not found persuasive because the various embodiments include substantial differences in the arrangement of the valves.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 7-9 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 4/29/05. The claims make reference to a hydraulic pressure controlled by the first and second proportional solenoid valves aside from the hydraulic pressure of the wheel cylinders. Figure 3 shows a hydraulic pressure measured at element 24 controlled by the first and second proportional solenoid valves 21,22.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the wheels and the vehicle first recited in claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

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Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re: claims 1, 2, and 3. The phrase "the vehicle" first recited but not limited to line 9 of claim 1 lacks proper antecedent basis in the claim.

Re: claim 2. The phrase "the wheel cylinder" in line 24 from the bottom is indefinite. It is unclear to the examiner as to which wheel cylinder applicant intends to refer to. The remaining claims are indefinite due to their dependency from one of the independent claims.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 6199964 to Ota et al.

Re: claim 1. Ota et al. show in figure 3 a vehicle hydraulic brake device comprising a hydraulic pressure source HP for generating and outputting a

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predetermined hydraulic pressure, a pressure adjusting valve RG for adjusting the output hydraulic pressure of the hydraulic pressure source to a value corresponding to a brake operating amount and wheel cylinders Wrl-Wfr actuated by the output hydraulic pressure of the pressure adjusting valve to impart braking force to wheels of the vehicle, further comprising a hydraulic pressure supply passage extending from RG down to the horizontal line above Wrl connected to a hydraulic passage extending from the point above MR1 down to below PC8 and including a portion of the horizontal line above leading from the pressure adjusting valve to the wheel cylinders, a first proportional solenoid valve PC7 provided in the hydraulic pressure supply passage for reducing the output hydraulic pressure of the hydraulic pressure source (within Wrr) and supplying it to the hydraulic passage (the portion of which including the horizontal line above Wrl) leading from the pressure adjusting valve to the wheel cylinders, a second proportional solenoid valve SA3 disposed between the hydraulic pressure supply passage (the lower portions of which) and the pressure adjusting valve for reducing the hydraulic pressure supplied from the hydraulic pressure supply passage (to zero when closed), a check valve CV5 provided parallel to the second proportional valve and allowing fluid flow from the pressure adjusting valve toward the hydraulic pressure supply passage and a control means ECU for controlling operations of the first and second proportional solenoid valves, wherein control of the hydraulic pressure supplied to the wheel cylinders during automatic brake control is performed by the first proportional solenoid valve and the second proportional solenoid valve as disclosed in col. 10 lines 3-4.

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Re: claims 2 and 3. See the rejection of claim 1 and a pressure chamber within the element labeled MC connected to the pressure regulating chamber as shown (RG is connected to MC), a master cylinder MC inherently including a master piston actuated by the output pressure of the pressure adjusting valve introduced into the pressure chamber since, as broadly claimed, the hydraulic pressure of the pressure adjusting valve is circulated throughout the brake device, a solenoid valve PC3 for supplying the output hydraulic pressure of the pressure adjusting valve to a hydraulic system leading from the master cylinder to the wheel cylinder Wrr, a hydraulic pressure supply passage as set forth above connected to a hydraulic passage as set forth above connecting the pressure adjusting valve to the solenoid valve.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 4, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. in view of US Patent 6422662 to Haas.

Ota et al. lack the limitation of the means for detecting that the output hydraulic pressure of the pressure adjusting valve has become equal to the hydraulic pressure of the hydraulic pressure supply passage, and wherein when it is detected by the means that the output hydraulic pressure of the pressure adjusting valve has become equal to

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the hydraulic pressure of the hydraulic pressure supply passage, automatic brake control is stopped.

Haas teaches in the abstract, in col. 4 lines 24-44, and in figure 1 the use of a brake device in which a means 107,108,110 for detecting that the output hydraulic pressure of above valve 113 has become equal to the hydraulic pressure of the hydraulic pressure supply passage or the area below valve 113, and wherein when it is detected by the means that the output hydraulic pressure of the pressure adjusting valve has become equal to the hydraulic pressure of the hydraulic pressure supply passage or when the pressure at the wheel cylinders is higher than the hydraulic , automatic brake control is stopped.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Ota et al. to have included means for detecting and comparing the hydraulic pressures, as taught by Haas, in order to provide a means of determining when to trigger pump activation.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 6216808 to Kuno et al. and 6349995 to Itoh et al. teach the use of brake devices in which a solenoid valve is arranged in parallel with a check valve allowing fluid flow in the direction from the master cylinder to the wheel cylinder.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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May 15, 2005

Melody M. Burch
5/15/05